The Effects of Interspecific Hybridization on Foraging and Competitive Ability in Fire Ants S. geminata and S. xyloni

Competitive exclusion theory predicts that two species can only coexist if their niches are not identical, such as when each species excels in differing aspects of an ecological tradeoff. The fire ant species *Solensopsis geminata* and *S. xyloni* hybridize with each other where their ranges overlap in central Texas, and field sites contain mixtures of hybrid and pure-species *S. geminata* colonies. In this study I tested whether this coexistence can be explained by a difference in foraging strategy between the hybrid and the parent species that would be consistent with a dominance/discovery tradeoff. I tested for differences in the rate of resource discovery and the ability to dominate resources by conducting laboratory foraging and competition experiments. Discovery rate was compared by allowing colony fragments to independently discover and recruit to resource baits in a central foraging box separated by a removable divider. The divider was then removed, allowing colonies to come in contact with each other and compete for resource dominance. If coexistence between the hybrid and the parental species is due to a dominance/discovery trade off, I expect a negative correlation between the hybrid's relative ability to discover resources and its ability to defend them from *S. geminata*.